

WHAT IS CLAIMED IS:

- 5
- 10
- 15
- 20
- 25
- 30
1. A telemetry system, comprising:  
a lead set comprising a plurality of electrocardiograph (ECG) leads connected to a lead set connector, the lead set providing an antenna formed from conductive material within at least one of the plurality ECG leads; and  
a telemetry unit which connects to the lead set and uses the antenna to transmit physiologic data sensed using the lead set, the telemetry unit including an impedance detector that monitors an impedance of the antenna, and further including a dynamic impedance matching circuit coupled to the antenna, the dynamic impedance matching circuit being responsive to impedance changes detected by the impedance detector to compensate for said impedance changes.
  2. The telemetry system as in Claim 1, wherein the antenna comprises a conductor that extends in non-coaxial relationship alongside an ECG conductor within an ECG lead.
  3. The telemetry system as in Claim 1, wherein the antenna comprises a coaxial shield portion of at least one of the ECG leads.
  4. The telemetry system as in Claim 1, wherein the antenna is a single-lead antenna formed from a single lead of the plurality of ECG leads.
  5. The telemetry system as in Claim 1, wherein the antenna is one of multiple antennas of the lead set, and the telemetry unit selects between the multiple antennas to provide antenna diversity.
  6. The telemetry system as in Claim 5, wherein the telemetry unit selects between the multiple antennas based at least in part upon an output of the impedance detector.
  7. The telemetry system as in Claim 1, wherein each ECG lead of the lead set comprises a respective antenna conductor that is separately connected to a switch within the telemetry unit, the switch being capable of interconnecting two or more of the antenna conductors to dynamically form an antenna, and wherein the impedance detector separately monitors impedances of each of the antenna conductors.
  8. The telemetry system as in Claim 1, wherein the telemetry unit is an ambulatory telemetry unit.

Sub  
A1

09853904-051101

9. The telemetry system as in Claim 1, wherein the telemetry unit is a unidirectional transmitter unit.

10. The telemetry system as in Claim 1, wherein the telemetry unit is a transceiver unit.

11. The telemetry system as in Claim 1, wherein the dynamic impedance matching circuit is controlled by a microcontroller coupled to the impedance detector.

12. A telemetry system, comprising:

a lead set comprising a plurality of leads that attach to a patient to monitor physiologic data of the patient, the lead set providing an antenna formed from conductive material within at least one of the plurality ECG leads; and

a telemetry unit which receives the physiologic data from the lead set and transmits the physiologic data from the antenna, the telemetry unit including a circuit that monitors an impedance of the antenna, and adjusts a dynamic impedance matching circuit coupled to the antenna to correct for impedance mismatches.

13. The telemetry system as in Claim 12, wherein the lead set is an electrocardiograph (ECG) lead set.

14. The telemetry system as in Claim 12, wherein the lead set is an electroencephalogram (EEG) lead set.

15. The telemetry system as in Claim 12, wherein the lead set comprises at least one of an SpO<sub>2</sub> sensor and an oscillometric blood pressure sensor.

16. The telemetry system as in Claim 12, wherein the antenna comprises a conductor that extends in non-coaxial relationship alongside a physiologic data sensing conductor within a lead of the leadset.

17. The telemetry system as in Claim 12, wherein the antenna comprises an outer shield portion of at least one of the leads.

18. The telemetry system as in Claim 12, wherein the antenna is a single-lead antenna formed from a single lead of the plurality of leads.

19. The telemetry system as in Claim 12, wherein the antenna is one of multiple antennas of the lead set, and the telemetry unit selects between the multiple antennas to provide antenna diversity.

20. The telemetry system as in Claim 19, wherein the telemetry unit selects between the multiple antennas based at least in part upon an output of the impedance detector.

21. The telemetry system as in Claim 12, wherein each lead of the lead set comprises a respective antenna conductor that is separately connected to a switch within the telemetry unit, the switch being capable of interconnecting two or more of the antenna conductors to dynamically form an antenna, and wherein the impedance detector separately monitors impedances of each of the antenna conductors.

22. The telemetry system as in Claim 12, wherein the telemetry unit is an ambulatory telemetry unit.

23. The telemetry system as in Claim 12, wherein the telemetry unit is a unidirectional transmitter unit.

24. The telemetry system as in Claim 12, wherein the telemetry unit is a transceiver unit.

25. The telemetry system as in Claim 12, wherein the circuit comprises a microcontroller that controls the dynamic impedance matching circuit.

26. The telemetry system as in Claim 12, wherein the lead set is detachable from the telemetry unit.

27. A method of conveying physiologic data of a patient to a remote location for monitoring, comprising:

sensing physiologic data of the patient with a lead set that attaches to the patient;

transmitting the physiologic data from an antenna which comprises at least one conductor that extends within a lead of the lead set; and

automatically adjusting a dynamic impedance matching circuit coupled to the antenna to compensate for changes in the impedance of the antenna.

28. The method as in Claim 27, wherein sensing physiologic data comprises sensing ECG waveform data.

29. The method as in Claim 27, wherein sensing physiologic data comprises sensing EEG data.

30. The method as in Claim 27, wherein the lead set comprises multiple antennas, and the method further comprises switching between the multiple antennas to provide antenna diversity.

Sub  
A1

09852904-054101  
TOTSO-106E5860